

Matters arising

The "pacing board" in selected speech disorders of Parkinson's disease

Sir: Critchley¹ and Downie *et al*² have recently discussed the severe communication disturbances present in some patients with Parkinson's disease. Because these difficulties are particularly resistant to traditional speech therapy, the latter authors suggested the use of a delayed auditory feedback apparatus in the management of selected cases. We would like to draw to the attention of physicians caring for patients with Parkinsonism a simple and inexpensive alternative form of therapy which can result in striking improvements. The "pacing board"³ is an easily portable wooden or plastic board segmented into eight sections by raised dividers. The patient moves a finger along the board from one segment to another pronouncing one syllable per segment. The usefulness of this device has been previously reported only in palilalia.³ We would suggest that patients with additional severe communication disorders also may benefit as exemplified by the following case.

This 53-year-old man had suffered from Parkinson's disease since the age of 37. He did not have a history of encephalitis and had never experienced oculogyric crises. He had undergone a right thalamotomy in 1965 with some improvement and had been treated with levodopa preparations since 1969 and had also undergone unsuccessful trials of bromocriptine. Over several years he had experienced frequent fluctuations in his clinical state throughout the day. In the few months prior to admission, he estimated that he was normal 10% of the day, "on" with dyskinesias 40% of the time and akinetic 50% of the time when he was usually chair or bed bound. During both phases of "on" and "off" he experienced severe communication difficulties. While "on" he had very rapid, festinating speech and palilalia. Communication was most markedly impaired by frequent hesitations lasting an average of 6 seconds with sound and word repetitions causing a reduction in his rate of speech to 30% of normal values.⁴ When "off" voice amplitude was reduced and he was often unable to do more than repeat a single syllable over and over again. Much of his speech was unintelligible independent of which clinical phase he was in. The addition of pergolide mesylate⁵ 2.2 mg per day in divided doses resulted in a marked

reduction in his akinetic periods. However, speech continued to be a major problem. Using the "pacing board" to enforce syllabic speech, during the "on" phases rate of coherent speech increased by 63% and all dysfluent behaviours were virtually eliminated. However, during the "off" phases the patient was often too akinetic to use the board effectively.

The similarities between disordered speech and gait in Parkinson's disease have been recognised for many years. Critchley⁶ discussed the similarity in response of locomotion and speech disturbances to external stimuli. It was because of these similarities and the response of walking difficulties to visual cues such as stairs, or lines painted across the floor that Helm³ designed the "pacing board". She reported its use in a single patient with palilalia. Our experience suggests that other Parkinsonian speech disorders also may benefit from the technique; however, it is likely that only a select group of patients will respond and we are in the process of defining the limits of its usefulness. Because of the simple and inexpensive nature of this device, we would recommend a trial of the "pacing board" before turning to the more complicated and costly delayed auditory feedback speech aid used by Downie *et al*.²

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Incidental focal intracranial computed tomographic finding

Sir: The publications by Hounsfield and Ambrose¹⁻³ a decade ago signalled the beginning of a new era in medicine, but especially in the clinical neurosciences. We might have to wait a few more decades to appreciate the real value of the CT scan, but most practicing physicians would agree that it will be comparable to some other great discoveries of the last hundred years, like the TB bacillus or penicillin. There is some disagreement about its present place in the process of neurological workup, and Leon A. Weisberg's paper⁴ seems to represent one extreme of the opinions. Based on the analysis of 28 patients with incidental CT abnormalities without prior neurological or neurosurgical consultation his conclusions can be summarised as follows: (1) clinical examination by a trained neurologist or neurosurgeon is more reliable than CT scan. (2) it might be not only useless, but even harmful to detect certain intracranial abnormalities. I strongly disagree with these conclusions, and wish to make the following comments.

His first conclusion can be criticised on at least two grounds. Firstly, CT scan might seem less cost effective than a neurological assessment, but considering all that is involved in such an assessment, it probably is not. This, however, may be quite irrelevant. The careful initial assessment of a patient takes a minimum of one hour, a routine CT scan approximately twenty minutes. With the continuous increase in the world's population, rapid propagation of technical advances in medicine and expectations of our patients we may very soon reach the point that very few neurologists or neurosurgeons will be able to afford to practice neurology as an art, and our management of patients will have to become more technical. The human component of medicine is too dominant for it to be ever completely replaced by machines; their maximum use, however, is highly desirable. In our search for a cheap, easily accessible, highly reliable, low risk technique to help us to screen patients for correctable intracranial conditions, CT scan comes as close to the ideal as we might ever achieve. Secondly, I argue the point that our clinical assessment is more reliable and should be used before CT scan for reasons different from the above considerations. It is not clear from his paper whether there were one or more neurologists involved in the post-CT assessment of his 28 patients. He must be aware of the frequent dis-